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TELECOMMUNICATIONS POLICY,
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No. 202

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SOUTH, NORTH PACT ON COMMUNICATIONS LINKS PREPARED

SK060003 Seoul THE KOREA TIMES in English 6 Feb 82 p 1

[Text] Communications Minister Choe Kwang-su said yesterday that his ministry would install 1,120,000 new telephone lines this year, raising the ratio of telephone distribution to 81 percent from last year's 76 percent.

He revealed the plan during a briefing session for President Chon Tu-hwan on major projects his ministry will carry out during the year.

Choe further said his ministry had already finished basic preparations for the possible conclusion of an agreement between South and North Korea concerning the exchange of postal matter, which was contained in a package proposal made to Pyongyang earlier this week.

Basic plans have been drawn up, the minister added, to improve the quality of various communication services, including data communication and telex and telephone operations, in preparation for the Seoul Olympics in 1988.

The speed post system will be additionally available for delivery to France, Australia and Belgium. The expansion of the speed post system will greatly help increase exports by enabling business correspondence and trade documents to reach their overseas destinations in one or two days, he said.

It further plans to raise the weight limit for international parcels to 20 kg from the current 10 kg. This will be put into practice on 1 September this year, Choe said.

The ministry will expand the international postal insurance system to have it cover up to 2 kg of precious metals, stocks and old money bills. The expansion will be effective from 1 August.

The insurance system under which subscribers are compensated for lost and damaged postal materials has been available only for clothes and general commodities up to 10 kg.

The ministry is also considering inaugurating an electronic postal system that will make it possible to transmit contract papers and various correspondence through facsimile to their destinations and deliver them by postmen, he said.

It will conduct feasibility studies and basic preparation for the system from October this year, Choe said.

As a means to enhance the duality of postage stamps, it plans to import gravure printing facilities in May and will issue stamps depicting major national events in series from 15 June with the new facilities, he said.

For the convenience of overseas Korean residents and workers, it will start exchange of postal money orders with five more countries, including the United States and the Philippines. This is now available with 14 countries.

The number of post offices that can deal with postal money orders will be increased to 92 from the current 66 for the convenience of customers, he said.

Choe further revealed that direct dialing international telephone calls would be made possible with 24 nations, including the United States, Canada, Japan, Indonesia, West Germany, Saudi Arabia, Kuwait, Britain and Australia, from 1983.

He said a 10 percent discount would be offered to postal users sending items beyond certain quantities from 1 October.

The ministry plans to collect heavier charges from business purpose telephones than and home use ones while setting telephone charges within a city depending on the length of each call on a gradual basis starting this year, Choe revealed.

It is also considering a system of discounting the charges for long-distance calls at night, he said.

Areas where TV viewing is difficult will be thoroughly checked through the postal network during this year and their reception will be completely improved by 1986, he added.

A special study team for satellite communications will soon be formed and will make a report on its feasibility by next June, he said. A final government decision on the matter will be made on the basis of the report by July this year. The facility, if it is set up, will start operation in September 1986 in time for the Asian games to be held in Seoul.

He said his ministry will conduct a basic survey for a bilingual TV system that can broadcast in Korean and one foreign language such as English or Japanese for the viewer's choice.

Experimental broadcasting using the system, which will be greatly helpful to foreigners to deepen their understanding of Korea, will start next year in cooperation with broadcasting companies, Choe said.

As for Olympic preparations, the ministry will install four satellite communication channels in addition to one channel for the submarine cable between Korea and Japan, he revealed. The installation of a data communication system for exclusive use during the Olympic games is being considered, Choe said.

An exclusive switchboard that will have 10,000 lines for the Olympic village and another 10,000 lines for the stadium will be constructed by 1985, according to Choe's presidential briefing.

The ministry also plans to install facilities to relay TV broadcasts to the people in North Korea by 1985, he said.

CSO: 5500/2103

SATELLITES BRING TELEVISION TO OUTBACK VIEWERS

BK221405 Melbourne Overseas Service in English 1110 GMT 22 Jan 82

[From the "Australian Insight" program]

[Text] A south Australian company, which last year introduced a system to bring television within the reach of hundreds of thousands of people in Australia's outback areas, hopes to provide the service to some overseas countries by the end of 1982. Once the system is extended, some of Australia's near neighbors will be able to receive television programs broadcast by Radio Australia's parent body, the Australian Broadcasting Commission [ABC], with the picture quality as good as the average suburban home in Australia receives.

According to the assistant managing director of Hills Industries in Adelaide, (Ralph Aston), there has been phenomenal response to its outback satellite receiving system. It has already been installed at locations in south Australia, western Australia, Queensland and the Northern Territory, in mining camps, drilling sites, sheep and cattle stations and other remote settlements.

Mr (Aston) says the present system reflects microwave transmissions of ABC television from Intelsat IV. When its successor, Intelsat IV-A is operational some time this year, its beam will cover a much wider area and take in all the Pacific islands, New Zealand, Lord Howe Island, Fiji, Norfolk Island and other areas. Mr (Aston) told Adelaide correspondent (Chris Ryan) about Hills Industries' plan. [Begin (Aston) recording] An excellent potential when Intelsat IV-A replaces Intelsat IV later on this year, (Chris). The footprint of Intelsat IV-A will be quite different and, unlike the current footprint, will cover all of Australia's near neighbors, countries like Papua New Guinea, and New Zealand, we understand, certainly places like Fiji, Lord Howe Island, Norfolk Island, and so on--our near neighbors, in other words.

[Question] You've already had interests shown from these countries?

[Answer] Yes, we have, a great deal of interests. Discarding for a moment the odd ones, such as an inquiry from Hong Kong, there have been a number of inquiries from Lord Howe Island, Norfolk Island, from New Zealand and several from Papua New Guinea already.

[Question] What sorts of groups are we talking about? Are they mining companies, expatriate Australians?

[Answer] I think they are probably expatriate Australians or people who have relationships with Australia, relatives or friends. In the case of New Guinea, for instance, one of the inquiries was from the proprietor of a drive-in theater. There are other individuals, a couple of trading companies, but quite a variety.

[Question] It sounds all very good in theory, but in practice, aren't you going to encounter problems of beaming Australian television into an overseas nation?

[Answer] Well, in fact, we are not doing that. The beam will come into those countries from Intelsat IV-A, so that the only restrictions on receiving these signals can be by the governments of the countries concerned, and I cannot speak for those, but international law at this stage, anyway, I understand, states that there can be no debarring of receiving of signals from any satellite.

[Question] And, of course, many of the countries that have shown interest would not be able to receive television at the present time.

[Answer] That's true. And certainly the residents of Papua New Guinea are very, very anxious to receive ABC transmissions, even right now.

[Question] Well, in Australia the system was launched several months ago. What has been the response here?

[Answer] It has been a tremendous response really. We have had enquiries from all over Australia. Some of those are from mining companies--we already have two installations on the Tom Price-Port Headland railway--there have been a number of installations and a lot more enquiries from pastoral stations scattered all over the northern territory, western Australia and Queensland.

[Question] And aboriginal missions as well, I understood.

[Answer] Yes. As a matter of fact we are due to install one within the next 10 days.

[Question] The cost of installing the system is about \$7,500. Wouldn't that figure be prohibitive for many people who might otherwise consider the concept very attractive?

[Answer] It may sound expensive at first reaction, (Chris), but it is not really because we are talking about people who up to now had no access at all to television, who are just not able to get today's news today, to see all the latest newscasts--all the things that we people in the cities take for granted. So it is a case of these people considering it not to be expensive, especially when you bear in mind, of course, that one of our (Telesat) systems will serve any number of points, so in a small community consisting of, let us say, a dozen homes, by the time you divide the cost of the system between those 12 homes it comes out at about \$600, which is about the cost of a normal television set itself. [end recording]

CSO: 5500/5663

POSTS AND TELEGRAPH PLANS SATELLITE USE

New Delhi PATRIOT in English 13 Jan 82 p 5

[Text]

WITH the first of the two domestic satellites for telecommunication and other purposes scheduled to go up in April, planning has begun in the Posts and Telegraphs Department for future satellites, reports UNI.

The life span of the Multi-Purpose Indian National Satellite (INSAT-I A) to be launched on 8 April and INSAT-I B, to be sent into orbit in the middle of 1983, is seven to nine years. Before these outlive their utility, new satellites will have to be in space to take over their job. Since it takes three to four years to plan a satellite, the department has initiated the necessary exercises.

Meanwhile, the P and T Department, the main user of the INSAT, is almost ready with all the ground equipment required for using the INSAT after launch. As the life of the satellite starts immediately after it is launched, the department wants to be ready to use it without much loss of time.

According to deputy director general M L Rawal, all the 28 earth stations being set up for INSAT project would be ready by 31 March to receive and transmit signals.

Seven earth stations including the two main stations at Madras and Delhi have already been commissioned. The civil works in the other locations have been completed and installation of the sophisticated equipment is

in progress.

ANOTHER SATELLITE

Although the satellite will be launched on 8 April, its commercial use will begin some time in May as it will take about four weeks for the engineers and space scientists to position the satellite in its assigned slot and test the various equipment on board.

At one stage last year, the prolonged strike at Indian Telephone Industries and the Electronic Corporation of India Limited, two major suppliers of equipment for the project, threatened to upset the schedule. But through continuous monitoring of the production programme and advance planning, the obstacles were overcome.

Mr Rawal said all the equipment, both indigenously made and imported had already reached the site. After installation, tests will start by the end of February.

Besides telecommunication, TV and meteorological purposes, INSAT may also be used for new services. The department has already received requests from potential users. Besides the Oil and Natural Gas Commission (ONGC) which wants to use

INSAT for effective communication between its off-shore and on-shore complexes, thermal power stations are also interested. Newspapers also can use the satellite for bringing out facsimile editions. The ONGC would use the satellite for monitoring of oil well performance and safety data through telemetry, for common and control purposes.

Although use of satellites for domestic communications is not new, INSAT would be the first civilian operational geo-stationary satellite system to combine telecommunications, TV broadcasting, meteorological imaging and data relay functions.

The INSAT will revolutionise telecommunications in the country benefiting most the hitherto inaccessible areas in the north east and the various islands.

The satellite is to be launched by Ford Aerospace and Communications Corporation from Nassau.

The earth stations in different places are to be equipped with powerful antenna and will have special facilities for ensuring continuous power supply. Besides batteries, diesel engines are being provided for the purpose. Each earth station costs about a crore of rupees.

The total cost of the project including the space segment would be about Rs 200 crores.

TELECOM PANEL MAKES RECOMMENDATIONS FOR NORTHEAST

Madras THE HINDU in English 8 Jan 82 p 16

[Text]

NEW DELHI Jan 7

The setting up of a special task force under a senior officer for supervising the existing postal and telecommunication organisation in the north-eastern region has been recommended by the high-power committee on telecommunications set up under the chairmanship of Mr H C Sarin.

The setting up of such a task force will assist the completion of detailed planning, surveys and implementation of the radio relay and other transmission systems within the framework of the plan.

The north-eastern region comprises Assam, Meghalaya, Manipur, Nagaland and Tripura, and the union territories of Arunachal Pradesh and Mizoram.

The committee has recommended that the development of the north-eastern region for ultra high frequency systems and multiplexing equipment which are now in short supply should be fully covered in the next Line plan P & T.

Attractive pay suggested: To attract telecommunication officers to serve in the north-eastern region, the Committee has recommended the fixing of attractive rates of pay for the personnel working in the private in the region. They must be provided with housing facility for their families and they should be allowed to retain departmental accommodation allotted to them at their home place of posting. The help of State PWD and defence services should be sought to construct departmental telecommunication buildings particularly in remote regions.

Public telephones: Making a number of recommendations in respect of public telephones, the Committee has said that there should be a time-bound programme to increase the number

of public telephones to 5 per cent of the equipped capacity of a telephone system in the telephone divisions and districts.

The revenues collected from public telephones should not be linked with the calls metered on their lines. Returns should not necessarily be a consideration in all cases for providing public telephones. Every airport, railway station and inter-State bus terminals should have local and area trunk STD public telephones.

Phone billing: The Committee, after examining the existing system of metering of telephone calls and the billing method, has suggested that the P & T should plan on the basis of progressive switchover from the current system of pulse periodic metering and the billing of STD calls to an automatic message accounting system (AMA) based upon indigenous development already achieved.

A detailed action plan and time-bound programme for implementation of switchover to AMA should be prepared to cover the metropolitan and major telephone districts in the first phase.

The action plan should take into account the preparatory work required in setting up indigenous manufacture and supply of AMA equipment for T, manufactured crossbar and strowger exchanges, import or development of AMA equipment for imported electronic exchanges, development of software for imported electronic exchanges and arrangements for data processors. A selected AMA system should be developed expeditiously for indigenous manufacture.

The AMA is the system used in the U.S. India has adopted the pulse periodic metering system (PPM) under which the local call charging counter is also used for recording the long distance charges.

PROBLEMS OF TELEPHONE PURCHASE, IMPORT DISCUSSED

Madras THE HINDU in English 14 Jan 82 p 8

(Article by C. V. Gopalakrishnan)

[Text]

A DECISION which the Union Government will soon have to take concerns the choice of technology for a new type telephone by the Indian Telephone Industries Ltd. for which it has received offers from two firms — Ericc Standard of Italy and Siemens A.G. of West Germany.

A four-member technical committee consisting of senior engineers from ITI, Bangalore, the R and T Directorate and the Telecommunications Research Centre, New Delhi, which visited the manufacturing plants of the Italian and German firms has recommended the former.

The R and T Department as well as ITI is not inclined to accept the offer from Ericc.

During discussions with telecommunication engineers who do not wish to be justified, it became clear that not everyone believed that the committee has recommended wisely. However, neither those who liked it nor those who have reservations were content they be treated as opponents, but rather as the last multinational.

Doubts

The Electronics Commission has advised the Government to consider whether the new type technology will stand up to the demands made on the new telephone when the exchanges go electronic. The new telephone should be of the digital type to ensure that the switch over to the electronic is smooth.

The committee also is not sure whether the technology offered by either of them will adequately meet the demands of the future electronic exchange network. It is, however, impressed. It has said, to predict the suitability of the offered types for fully electronic and digital telephones of the future. It was said ITI will have to depend on its R & D in bringing about the

required improvements.

The Public Investment Board has withheld decisions on the committee's recommendation in view of what has been said by the Electronics Commission. No manufacturer is as yet making the digital telephone and it may take a few years before the technology is developed for production and becomes available to India. If the Electronics Commission's views prevail, the Government will have to reject the offers from both Ericc and Siemens and wait until it can buy a suitable technology for digital telephones.

Such indefinite waiting will cause acute telephone shortage in the next few years, ITI fears. The capacity for making telephone exchange equipment now is around 7.5 lakh lines — three lakh lines each in Bangalore and Rae Bareilly (U.P.). ITI and 1.5 lakh lines in Paigat. ITI. When the two new electronic exchange units, each for five lakh lines, go into production they will add another 10 lakh lines, making up a total of 17.5 lakh lines. This itself will call for a manufacturing capacity of 18 lakh telephones. The capacity will have to be stepped up to at least 20 lakh telephones to take care of the requirements of extensions of the private automatic exchanges and replacements.

The ITI whose present capacity is only 5.5 lakh a year is in no position to expand its production four fold to meet this future demand with its present largely manual methods of production. If it is to wait indefinitely to finance collaboration for new technology, there will soon develop a situation with the country having an ever-increasing capacity much larger than the availability of telephones.

The Electronics Commission does not share this dismal view. It apparently believes that the licensing of a large number of State telephone units with the Central Electronics and Communications Ltd. would

fully take care of the telephone demand

If the Government decides not to wait for the technology for making digital telephones and to depend on ITI's A and D to modify its telephones to meet the needs of electronic traffic it will have to make up its mind on the committee's recommendations. The committee's recommendations are held unsound because of the view that its conclusions are not fully borne out by its own detailed evaluation of the competing technologies offered by Face and Siemens.

Ironical

It is an irony that Siemens' offer has been rejected simply because of its technical excellence which according to the committee, would not suit the Indian conditions.

The high productivity and quality technology call for a complete change of the existing culture, organisational set-up and the level of operational staff as a pre-requisite. This applies to Siemens with a greater degree in view of the higher



precision and more complex machines employed.

If any of the complex machines or equipment suffer a down-time beyond what is normally envisaged alternative manual methods to keep up the production at least at reduced levels are possible in the case of Face whereas in the case of Siemens it would not be possible," the committee has said.

On the contrary "the Face technology permits smaller volume of production including capsules in different locations."

Disquieting

Does this advantage fully tilt a decision in favour of Face? The committee itself points out that the modifications in different locations on predominantly manual basis imply a higher cost. However, "in the case of Siemens, several high capacity machines will have to be kept underutilised and therefore the cost of penalty of low volume production is higher."

If doubts still persist over the wisdom of choosing Face, it is due to a number of other observations made by the committee. A particularly disquieting aspect is that the new style telephone, the Domino set and the Gondola, developed by Face "is yet to be accepted by PTT, the Italian telephone administration."

The committee has also said, "As far as any feedback from the subscribers is concerned, the firm did not have full details except to state that the model was generally well-accepted in the US in view of their wide distribution through a private market; the subscribers spread over a large area, exact feedback was not available."

A number of other observations by the committee support the belief that its recommendations call for a closer look. One is that ITI should stick to the rotary dials offered by both the parties instead of the push-button dial. Manufacturing the latter costs far more than the former, it has said.

This has been challenged on both economic and technical grounds. The existing costs of making the two dials are not comparable. Push button dials are now produced in much smaller quantity and the comparisons are made on the basis of the present scales of production. When its production is expanded — as it is bound to be in future — the costs would come down steeply. Both Face and Siemens have offered to make push button dials as part of their package to ITI.

Rotary dial or push button type

Neither Face nor Siemens rotary dial will fit the 677 telephones now being made by ITI for which it had earlier imported the dials from Tomura, Japan and later purchased the know-how from the Japanese firm. A second purchase of knowhow for this dial from Face or Siemens is not understandable when neither firm can claim any superiority over the Tomura dial. Purchase of knowhow should be for the later generation push button.

The other argument in favour of the push button is that it is less fault-prone as it has no mechanical or moving parts. The modification of the push button when the country switches over to electronic

exchanges will be much easier than with the rotary dial.

These considerations will not make matters easier for the Government in taking a decision. If it decides to examine the matter afresh, it may become necessary to float fresh tenders and invite more foreign parties. This will delay matters. It should, however, be noted that the choice of a wrong technology for making telephones will muck up telecommunications much worse than it did in the Sixties when the electromechanical cross-bar was inducted into the exchange network.

A survey carried out by the P and T is reported to have shown that 40 per cent of the faults in the telecommunication system resulting in wrong calls is due to the faults in the telephone itself. The telephone is the weakest link in the telecommunication network as it is very widely dispersed in its locations. The long-suffering subscriber harassed by telephones which either tease him with wrong calls or go dead is therefore entitled to ask for the greatest care in the choice of a technology for a new model which will perform far better in the future.

CSO: 5500/7070

BRIEFS

UTTAR PRADESH EXCHANGES--New Delhi, January 6--Small electronic telephone exchanges are proposed to be set up at Nainital, Almora and Ujhani during the year as part of the programme for the switchover from electro-manual exchanges. The telephone department had set up a task force for recommending a comprehensive plan to improve the telecommunications system in the rural areas. Its report envisages the installation of small electronic exchanges in Agra, Alleppey, Barmer, Belgaum, Bhopal-Sehare, Jalpaiguri, Kohima-Mokak-chung-Tuensang, Katihar, Kolaba, Korapur, Krishna, North Lakhimpur, Mehsana, Murshidabad, Nadiad, South Arcot and Pondicherry and Sangrur districts. [Bombay THE TIMES OF INDIA in English 7 Jan 82 p 9]

COMMUNICATIONS EXPANSION PLANS--The Posts and Telegraphs Department will provide two lakh telephones and 500 new telephone exchanges in the current year. Eighteen new telex exchanges, 2,800 new public telephones will also be installed at a total cost of Rs 452 crores, reports PTI. Construction of 175 post offices and 1200 staff quarters would be carried out with an outlay of Rs 18.26 crores. The expansion programmes for the current year includes the opening of 1600 rural post offices, appointment of 2000 extra departmental agents, mobile counters in 2000 villages and installation of 1000 letter boxes, says an official release. Overall, in the Sixth Five Year Plan, the department plans to provide 13.3 lakh new telephones, 3500 new telephone exchanges and 20,000 new public telephones. On the postal side, the department in the plan period expects to open 8000 new rural post offices appoint 10,000 additional extra department agents to improve the daily mail delivery and provide mobile counters in 10,000 more villages. [New Delhi PATRIOT in English 13 Jan 82 p 5]

CSO: 5500/7069

PAKISTAN

BRIEFS

PAKISTAN-UK DIRECT DIALING--Islamabad, Jan 25: Pakistan Telephone and Telegraph Department has notified that international direct dialling telephone service has been introduced from Pakistan-UK and UK-Pakistan directions. Pakistan is now connected with 14 countries i.e. Bahrain (973), France (337), Iran (98), Ireland (353), Italy (39), Japan (81), Germany (49), Kuwait (965), Oman Muscat (968), Saudi Arabia (966), Singapore (65), Switzerland (41), UAE (971) and United Kingdom (44) on international subscriber dialling through International Gate-way Exchange, Karachi.--APP. [Text] [Karachi DAWN in English 26 Jan 82 p 10]

CSO: 5500/5675

INTER-AFRICAN AFFAIRS

BRIEFS

'PANA' AGREEMENT--The agreement creating the Pan-African News Agency, PANA, enters into force today. It must be signed by 16 countries to be effective. This has now been done: Guinea-Bissau, represented by a (?minister), has ratified the agreement at the PANA headquarters in Dakar. During this ceremony, PANA's Director Mr Diallo recalled that the agency has been declared a priority project in the system of world communications. This declaration was made during the meeting of the international program for the development of telecommunications held in Puerto Rico under UNESCO patronage. A [word indistinct] million CFA-franc aid has been granted to PANA. According to Mr Diallo, PANA is to receive an aid of 96 million CFA francs from the UN development program and another 600 million CFA francs from the Arab countries of the Gulf for the project of an integrated telecommunications network. This project, which will be realized with the assistance of the International Telecommunications Union, is estimated to cost \$750 million. [Text] [AB051200
Dakar Domestic Service in French 2200 GMT 4 Feb 82]

CSO: 5500/2103

LESOTHO

BRIEFS

TELECOMMUNICATIONS LINK RESTORED--A telecommunication link between Lesotho and South Africa was restored on Wednesday after a disruption of nearly a week. A spokesman for the Lesotho Telecommunications Corporation said in Maseru this week that there was a breakdown on a critical equipment on the cable link which inconvenienced many people. [Text] [Maseru LESOTHO WEEKLY in English 15 Jan 82 p 8]

CS0: 5500/5674

BRIEFS

KUWAIT FUND TELECOMMUNICATIONS ASSISTANCE--A project for the reconstruction of an earth station in Beira to operate via satellite will be carried out in our country. This project will receive full financing from the Kuwait Fund for Arab Economic Development. According to Radio Mozambique, an agreement was signed last Monday between our country and the Kuwait Fund, providing for a loan of approximately 100 million meticals. The agreement was signed by Jorge Costa, national director for planning of the Ministry of Post, Telegraph and Civil Aviation and Abdelatif Yusef Al-Hamad, chairman of the Kuwait Fund. This project, which is aimed at the development of the telecommunications field in Mozambique, also includes the improvement and extension of the telephone and telex networks between the port of Beira and Zimbabwe. [Text] [Maputo NOTICIAS in Portuguese 27 Jan 82 p 1]

CSO: 5500/5668

RADIO HAMS PLAN BALLOON EXPERIMENT

Johannesburg: THE CITIZEN in English 29 Jan 82 p. 9

[1001]

MEMBERS of the South African chapter of the International Amateur Radio Satellite organisation (SA AMSAT), will launch a balloon with a radio transmitter to carry out tests at about 10.15 on Saturday.

The project code-named "BACAR" (Balloon Carrying Amateur Radio) is the first step in the development of local technology and expertise which could lead to the construction of an amateur radio satellite.

Beacon

The balloon, carrying a radio beacon, will be launched west of Johannesburg and is expected to rise to a height of 10 to 15 km before it will burst. The radio beacon will then descend on a parachute. It is expected that the signals will be heard at distances up to 700 kilometres.

"The first test is a simple exercise," said Mr Dave Woodwall, the

project leader. "We hope to gain experience in tracking the balloon and recovering it soon after its descent."

An operations control centre will be installed at Paterson Park recreation centre, 7th Street, Orange Grove, Johannesburg. Members of the public interested in the project are invited to visit the control station on Saturday morning between 10.00 and 12.00.

"Financing a project of this nature is a problem," Mr Hans van de Groenendaal, secretary of SA AMSAT, said. "We beg, borrow and steal, so to speak. We have received support from the electronics industry and are thankful for their help. More sponsors are, however, required once we enter phase 2 and phase 3, which is a total South African radio satellite package."

It is planned to fly a more sophisticated unit towards the end of February and again in March.

[1001] 1001/1002

NEW INTERNATIONAL TELEPHONE EXCHANGE TO BE INSTALLED IN LUSAKA

Lusaka DAILY MAIL in English 20 Jan 82

[Text] A new fully electronic international telephone exchange is to be installed at the Lusaka main exchange to increase the existing capacity and improve the telephone services.

The installation of the new exchange follows the signing of a K2.8 million agreement between the Posts and Telecommunications Corporation (PTC) and LM Ericsson of Sweden last December.

Ericsson managing director Mr Berth Thul said in Lusaka that the installation of the exchange would increase the number of circuits by 436 from the present 240.

Director-General for PTC Mr Philemon Ngoma confirmed the signing of the agreement saying the expansion to the exchange would also provide direct subscriber dialing facilities to a number of overseas countries.

"I confirm that the PTC has signed a contract with LM Ericsson of Sweden for the expansion of the international exchange in Lusaka. The extension will also provide direct subscriber dialing facilities to a number of countries overseas," Mr Ngoma said.

Mr Thul said the money for the expansion had been made available following a loan given by a Swedish commercial bank to PTC. The expansion to the exchange would also mean further modifications of the existing 25 Ericsson exchanges.

Work is expected to start in August and end by November 1983. The new exchange is an AXE 10 model which is the latest design from Ericsson and is a digital Stored Programme Controlled (SPC) switching system.

The ultimate capacity for the exchange is 2,180 circuits and would now supplement the Lusaka international exchange installed during the heads of government Commonwealth Conference in 1979 to replace the manual one in use at the time.

Zambia is the 34th country to choose electronic AXE exchange. Others are France, Yugoslavia, Australia, Denmark, Argentina, Spain, Saudi Arabia, Netherlands, Kenya and Sweden itself.

Mr Thul also said the first fully electronic private automatic branch exchange type ASB 900 (PABX) was presently being installed by Ericsson at Nchanga Consolidated Copper Mines Broken Hill division.

FORTHCOMING INAUGURATION OF RADIO FOUR REPORTED

Salisbury THE HERALD in English 15 Jan 82 p 11

[Text]

RADIO FOUR an educational station, will be broadcasting in four to five months, if equipment arrives and funds are available.

The Deputy Director General of ZBC, Mr Tirivavi Kangai, said in Salisbury yesterday: "Equipment from Europe should arrive in three to four months. It has taken longer than expected and we will need about six weeks to install it."

The ministries of Education and Culture, Agriculture, Community Development and Women's Affairs and several others hoped to use the station.

They were now discussing with ZBC ways of funding the broadcasts.

Radio Four would operate for most of the day — broadcasting formal, non-formal and adult education programmes.

"We hope to offer educational courses on

agriculture, health, hygiene and community development."

Although the service would reach both urban and rural people, it was important to communicate with those in isolated areas of Zimbabwe.

"In the long run we have plans to have radio listening centres in the rural areas," Mr Kangai said.

The station would not have advertisements between programmes.

"We are still trying to come up with a proper formula for advertising but we might consider letting companies sponsor a whole programme."

Mr Kangai said no decision had been taken on where the station would be set up.

The idea of having an educational radio station was not unique, he said: "Many countries do this and it was one of the recommendations of the four-man BBC team who visited Zimbabwe in 1980."

CSO: 5500/5662

USSR SPONSORS INTERNATIONAL COMMUNICATIONS EXHIBITION

Moscow 3-YA MEZHDUNARODNAYA VYSTAVKA "SISTEMY I SREDSTVA SVYAZI". "SVYAZ'-81." in Russian 1981 pp 1-8

[Exhibit brochure titled "Communication Systems and Equipment" published by the USSR Department of Commerce and Trade]

[Text] Introductory Note

The 3d International Exhibit "Communication Systems and Equipment," "Svyaz'-81" will be held 3-16 September 1981 in Moscow at Sokol'niki exhibition area.

The goal of the exhibit is to acquaint visitors with the most recent achievements in the area of communication systems and equipment.

The exhibits of enterprises and organizations from 22 countries--from Austria, Bulgaria, Great Britain, Hungary, GDR, Denmark, India, Spain, Italy, Canada, Netherlands, Norway, Soviet Union, USA, Finland, France, Federal Republic of Germany, Czechoslovakia, Switzerland, Sweden, Yugoslavia and Japan--will be shown.

The total exhibition area is 25,000 m².

Main thematic groups at the exhibit:

- radio communications;
- satellite communications;
- terminal communications equipment;
- communications channels and networks;
- television and radio broadcasting;
- measurement engineering;
- postal communications;
- amateur radio equipment;
- scientific and engineering literature.

Brief Description of the Expositions

Soviet Union

(pavilion No 4, 13, 14 and 15; exposition area 10,000 m², including 6,100 m² of occupied space and 3,900 m² of open area)

Twelve ministries and departments participated in preparing the exposition.

The exposition contains more than 3,000 exhibits which will evoke considerable interest on the part of the visitors.

The "Yadro-2" shortwave radio station, which is used in civil aviation, will be demonstrated in the "Radio Communications" section. It has hybrid and integrated microcircuits and an analog-digital method of synthesis for generating a frequency network. Equipment which assures radio communications of all railroad and civil aviation services will also be shown.

The receiving distribution network of the "Orbit-2" station and the "Moskva-5" satellite ground communication station will also be on view in the "Satellite Communications" section.

The "Globus-1sT" multiple-station system for television reception on ships, the APB-3TsT color television equipment and programming unit, the DA-2TsT color television two-room control room, and the "Kadr-5" professional video tape recorder will be exhibited in the section "Television and Radio Broadcasting."

The "Kvant" institutional and industrial quasi-electronic automatic telephone station, the "Pskov-25" rapid telephone communications unit, and the "Veformika" microcomputer will be demonstrated in the section "Terminal communications equipment."

Oscillographs, oscillators, logic analyzers, the CH3-55 electronic counting frequency meter and other exhibits will also be of interest to visitors.

Expositions of Foreign Participants

Austria

(pavilion No 11; exposition area is 700 m²)

The Federal Department of Economics is the organizer of the group exhibit. In addition, the firms "Gefco Industrierhaltung GmbH," "International Elektronik" and "Telekommerts" will present independent exhibits.

Studio broadcasting equipment, radio relay network equipment, precision electrical measuring equipment, monitoring and tuning devices of electrical communications equipment, remote control panels, professional and cassette recorders, dictating machines, microphones, earphones, radio equipment, etc., will be included in the exhibits.

Bulgarian People's Republic

(pavilion No 4a; exposition area is 150 m²)

GPT "Elektronika" is the organizer of the group exhibit.

Bulgarian organizations and enterprises will demonstrate automatic telephone stations, radiorelay equipment, multiplexing telephone systems, radar units, devices for welding plastics, pocket radiophones, amplifiers, terminal communications equipment, etc.

Great Britain

(pavilion No 9; exposition area is 860 m²)

The Great Britain Ministry of Trade is the organizer of a group exhibit (it includes the firms "Hewlett Packard," "Rank Zintel," "Marconi," "Maltiton," "Data Loop," and others).

The collective booth will have the firms "Amtest Associates Ltd," "Veyvtek" (USA), "Kontron Elektronik GmbH" (FRG), "Elektrotek" and others, about 15 firms in all.

The firms "Bell and Howell," "Rank Xerox" and others will exhibit independently.

Automatic systems for testing analog and digital printed circuits, devices and equipment of data transmission systems, television equipment, equipment for plasma etching, programming devices, measurement equipment, radio searching and calling equipment with noise suppression, universal programmers, multiplexor analyzers of logic states, analog testing systems, equipment for making printed boards, programmable signal generators, etc. will be demonstrated.

Hungarian People's Republic

(pavilion No 20; exposition area is 430 m²)

The organizer of the collective booth of Hungarian organizations and enterprises is "Khungekspo."

Automatic telephone stations, multiplexing equipment, equipment for transmitting data, radiorelay equipment, measurement instruments, radio receivers, tape recorders, television sets, etc. will be demonstrated at booths of the Hungarian exposition.

German Democratic Republic

(pavilion No 43; exposition area is 970 m²)

"INTERTELEKOM" is the group participation organizer.

Radiorelay equipment, integrated units and power generating equipment, security protection devices, communications equipment, magnetic tapes and computer tapes, error film, microfilm units, etc. will be demonstrated at the booth.

Denmark

(pavilion No 11; exposition area is 200 m²)

The organizer of the group is the Danish export council, whose booth will have nine firms: "Allincks," "Audio Group," "Sterno," "Rex Rotary," etc.

Sound recording devices, transformers, amplifiers, electronic switching equipment, signal generators, analyzers, measurement devices, etc. will be demonstrated.

India

(pavilion No 11; exposition area is 18 m^2)

The firm "Electronics Trade and Technology Development Corp. Ltd." will demonstrate radio tubes, semiconductor devices and other electronic components of communications facilities, consumer radio equipment, telephone sets, etc.

Spain

(pavilion No 11; exposition area is 36 m^2)

The firm "Telephony and electronics" will demonstrate telephone station equipment, electronic equipment, measurement devices, terminal communications equipment, etc.

Italy

(pavilion No 11; exposition area is about $1,000 \text{ m}^2$)

The organizer of the group of exhibitors is the Italian Institute of Foreign Trade (I. CH. Ye.). "Unimak" firms will also participate.

Printed boards, telephone station equipment, switching equipment, channel multiplexing systems, terminal communications equipment, custom cables, etc. will be demonstrated.

Canada

(pavilion No 5; exposition area is 18 m^2)

"Mitel Corporation" will participate.

Netherlands

(pavilion No 11; exposition area is 220 m^2)

"Philips" company and others will demonstrate radio and television equipment with high quality recording of transmissions, radiotelephone devices and instruments, electronic components, etc.

Norway

(pavilion No 11; exposition area is 36 m^2)

"Norsk Data" company will participate.

United States of America

(pavilion No 5; exposition area is 300 m²)

Collective booths will be shared by "James Group," "SRL," and "Welt International" companies.

"Praymari," "ATT," "Allen Bradley Co," and "Arco Solar" companies will have independent exhibits.

The companies will show mobile television units, consumer radio equipment, postal handling equipment, control and measurement equipment, programmers, signal and code converters, spectrum analyzers, etc.

Finland

(pavilion No 4a; exposition area is 930 m²)

The Finnish company group participation organizer is "Suomen Messut" (the booth will have the companies "Nokia," "Siemens," "Telefenno," "Televa," etc, nine companies in total.

They will demonstrate radiotelephone systems, portable radio units, electronic computing equipment, radio measurement equipment, control and measurement and diagnostic equipment.

France

(pavilion No 4a and 11; exposition area is 1,000 m²)

The French Exhibit Committee and the company "Komef" will organize combined booths (they will have "Sit Alkatel'," "Sat," "Sazhem," "Sitel'," "Thompson," "Compagnie Deutsche, et al).

"Milipor," "Enertec Shlumberger" and "Jobain Ivon" companies will also participate independently.

They will demonstrate long distance communications facilities, lightning conductors, spark dischargers, cable samples, miniconnectors and plugs, electronic equipment for satellite communications, graph-plotters, automatic recording devices, highspeed computers, apparatus for transmitting data over radiorelay communications lines, measurement equipment, terminal communications equipment, etc.

Federal Republic of Germany

(pavilion No 5 and 11; exposition area is 3,400 m²)

"Novea," "Mul'tik" and "Integronik" companies will organize collective booths.

The collective booth arranged by "Novea" will have the companies "Frantz Kul'man GmbH," "Leybol'd Heraus GmbH," "Perkin Elmer GmbH," "Laser Optronik GmbH," "AMK Angagenfertrib Myuller and Korf GmbH" et al, 17 firms in all.

"GVC Ovek," "Planex GmbH," "Video Technik Nord," "IFG Innenausbau," "Indumex," "Exim-Trade R. Ch. Rapovik," "EG+G Instruments GmbH," "Know How Export V. B. GmbH," "Optronics International," "El'matik GmbH," and "Labomed" companies will participate independently.

They will demonstrate radio communications facilities with moving station linking, radiolinks, measurement devices, instruments for monitoring communications facilities and systems, electroacoustic equipment, studio and radio-broadcasting equipment, terminal communications equipment, signalling systems, vacuum engineering and devices, equipment for making printed boards, machines for making and repairing hybrid circuits, ship radio and telephone communications, command devices, relays, resistors, cathode ray tubes, radio tubes, semiconductor devices and other electronic components of communications facilities, consumer radio equipment, telephone sets, etc.

Czechoslovakian Socialist Republic

(pavilion No 4a; exposition area is 215 m²)

"Kovo" company and the ChSSR Ministry of Electrical Engineering will present automatic telephone exchanges, receive-transmit, television and radiorelay equipment, telephone sets, cables, etc.

Switzerland

(pavilion No 5 and 11; exposition area is 1,250 m²)

"Sovexpo" company is the group participation organizer. Its booth will have "Fon Arks," "MEF," "Bal'tsers," (Lichtenstein), "V+F" (USA), "Ampex," (Great Britain), et al.

"Pierre Voll," "Videlkom," "Leytron," "Afig," and "Tsepratex" companies will exhibit independently.

Equipment for making printed and hybrid circuits, data collection and analysis systems in communications engineering, galvanic processes, professional and consumer radio equipment will be demonstrated at the booths.

Sweden

(pavilion No 11; exposition area is 48 m²)

"Svesia Silkscreen Mashiner AB" company will demonstrate integrated automatic production lines for making printed boards.

Socialist Federated Republic of Yugoslavia

(pavilion No 21; exposition area is 300 m²)

Television equipment, cables, magnetic tape recorders, record players, etc. will be demonstrated at the collective booth of the Institute of Economic Propaganda "Yugoslaviyapublik."

Japan

(pavilion No 11; exposition area is 1,460 m²)

"Sorenboyekikay" company (whose booth will include "Sumitomo," "Nippon Elektrik Co," "Sonny Corp," "Japan Air Radio," "Ando Electric Co," et al, 15 firms in all) and the Japan-Soviet Trade Association (whose booth will include "Chori," "Tayriku," "Eyva Trading" companies and others, 6 firms in all) are the organizers of the collective exhibits.

Satellite communications systems, optical communications systems, microwave transmitters, telephone sets, video projectors, computers, measurement equipment, television monitors, amplifiers, loudspeakers, nonwoven and packing fabrics, films, color graph-plotters, radio and television equipment with high quality recording of transmissions, postal equipment, etc. will be shown.

A scientific and engineering seminar will be held while the exhibit is going on. There is a fee for entrance to the exhibition. Tickets can be obtained: by cash payment at Sokol'niki ticket booths, by non-cash payment at the bookkeeping offices of V/O "Ekspotsentr" TPP SSSR, address: Moskva, Sokol'nicheskiy val, 1a, from 10 am to 5 pm, closed from 12 noon to 1 pm. Tickets are issued to organizational representatives upon demonstration of proof of money transfer to cash account number 60800024 of V/O "Ekspotsentr" at Vneshtorgbank SSSR, which has been certified by an official stamp of Gosbank.

During the hours of the exhibition specialists may obtain: exhibits catalog, which will acquaint specialists with participants of the exhibition and their exhibits (the procedure for getting catalogs is the same as for entrance tickets), and also exhibitors advertising and informational materials which are distributed directly by the exhibit participants at their booths.

9424

CSO: 5500/1007

SERIOUS DIFFICULTIES AFFECT TELEPHONE NETWORK

Athens EPIKAIIRA in Greek No 701, 13 Jan 82 p 22

[Article by K. Lalandzis]

[Excerpt] The Greek Telecommunications Organization [OTE] promises improvement of its services following the readjustment of its rates which will yield it several billions of drachmas--around 14 billion according to estimates. Every new administration always promises improvement of services. The fact remains, however, that the complaints of the OTE subscribers are many, serious and justified. Moreover, the public's patience is exhausted. Much could be cited, but a few characteristic cases are:

1. The information centers (131, 132, 161, etc.) are trying the public's patience in a terrible way. It is said that these services will now be computerized which means that the customer will not be nailed to his receiver for..hours in order to get the information he is seeking.
2. Both the local and long distance communications also suffer terribly. The "buzzing" starts as soon as the second or third number is dialed. In some cases (especially at peak hours) connections are difficult to Kerkyra, Arta, Oytheion, Igoumenitsa, Komotini, Xanthi, Florina, Veroia and Skiathos. Also, to Irakleion, Kymi, Khalkis, Mykonos, Kania. How soon will such conditions change?
3. Telephone connections with Europe here become problematic and OTE has recently received many protests. Communication with some countries is very difficult--i.e., Holland, Luxemburg, Switzerland, Finland, Sweden, the Middle East, Portugal, the American countries, etc.
4. Also, the repair of damaged telephone sets and lines causes continuous public protests. For repairing minor damages 5 to 8 days are needed. As a result there is chaos in business communications and even lives of sick people at home are lost.

Pending Applications

In addition, there are 700,000 applications pending, 275,000 of them in Athens. The new OTE administration says that it will now install more telephones but this is not enough. The applicants want to know the exact timetable. An applicant in Salonica is protesting that he has been waiting for 10 years, while applications in Athens have been pending since 1974. About 100,000 installed phones in Athens remain idle for lack of [connecting] lines and according to experts the existing network is fully loaded.

GREECE

BRIEFS

OVERSEAS TELEPHONE COMMUNICATION--The telecommunications organization announced yesterday that as of February 1st 1982 telephone calls to India, Panama and Thailand will become automated at a cost of 187 drachmas per minute. [Excerpt]
[NC291930 Athens NEWS in English 28 Jan 82 p 7 NC]

CSO: 5500/5323

TELECOMMUNICATIONS AGENCY LOSES FIGHT TO RETAIN MONOPOLY

Stockholm DAGENS NYHETER in Swedish 23 Dec 81 p 9

[Article by Kerstin Kall: "Comvik Wins Mobile Telephone Contest"]

[Text] The private mobile radio company Comvik is permitted to continue to compete with the National Telecommunications Administration and employ total automation on its mobile telephones.

The government came to that decision on Tuesday, and in doing so it settled the struggle that has been raging since September between the National Telecommunications Administration and its only remaining mobile telephone competitor.

"What a Christmas present!" says Anders Runer, a Comvik director. "Now we can use all our special skills. The employees who formerly made connections for people using the telephone can concentrate on providing our customers with an expanded communications service now.

Monopoly

The National Telecommunications Administration wanted to withdraw Comvik's license, giving as its reason the assertion that that company's license only applied to the manual making of connections for telephone conversations, and not to the process of doing so automatically.

The struggle broke out at approximately the same time the telecommunications agency started its NMT system--a Nordic fully-automatic mobile telephone system.

The agency claimed that mobile telephones come under its monopoly. Comvak appealed to the ombudsman on freedom of trade (NO) and obtained support from him, and later appealed to the government.

The government agrees with the National Telecommunications Administration that mobile telephones come under its monopoly.

But the government also feels that, in the case of Comvik, there are special circumstances to be taken into consideration. Comvik, or its predecessor, Foretagstelefon AB, has been in the market for approximately 10 years. Its activities are on a small scale by comparison with those of the National

Telecommunications Administration, and Comvik's system differs technically from the agency's NMT system (Nordic mobile telephone), which is more advanced.

Competition

"A certain amount of competition in this field fosters development," comments Claes Elmstedt, minister of communications. "Customers now have a chance to choose between two automatic systems."

Comvik must confine itself to "the assigned frequencies". That limitation means that Comvik cannot expand its system beyond the frequencies they have at present. It also means that they can be restricted to the Stockholm area after some time has passed.

However, Anders Runer believes that they still can reach their target of 6,000 customers (10 percent of the market) throughout the entire country.

"A reasonable compromise," is the comment of Tony Hagstrom, the director general of the National Telecommunications Administration.

"The government maintains what we have claimed all along, and that is that automatic mobile telephones come under the monopoly. It is enormously important to get that principle established.

"Another important point is the fact that the government cites historical reasons for Comvik's exemption where our monopoly is concerned and that they point out that we must economize on frequencies.

Comvik's equipment will be tested now--by the National Telecommunications Administration--before being used. "We don't foresee any difficulties on that point," says Tony Hagstrom.

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CSO: 5500/2071

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